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ABSTRACT

All students in the new, unique four-year degree program for technical translators at Flensburg Polytechnic (Germany) must study engineering as well as language and cultural skills, language information technology, and theoretical and practical aspects of translation. The program was conceived and established by engineers with an interest in languages and translation, reflected in the program staff composition, which includes two applied linguists (however, the staff does not include theoretical linguists or language teachers; the program is practical, and little research is undertaken). Technical subjects comprise about half the curriculum, including descriptive engineering, technical translation, and information technology. Engineering specialists lecture periodically on specialized topics. In the second year, emphasis is on engineering physics and electrical engineering, including computer science and telecommunications. Standard engineering textbooks are generally unsuitable for translators, but more descriptive texts for training apprentices, craftsmen, and technicians are useful and comprehensive. Popular illustrated reference books can also be used, and educational videos and two-dimensional transparent models are readily available. Technical field trips are an integral part of the program. Enrollment is limited to 20-25. (MSE)

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Teaching Technical Translation: An Engineered Approach at Flensburg Polytechnic

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In a survey undertaken three years ago in Germany, to which more than 600 professional translators responded, 76 % indicated that they had to deal exclusively or mainly with technical texts (Schmidt, 1990). However, only 44 % had chosen engineering as one of the supplementary subjects during their course of studies. In other words, many and perhaps even the majority of technical translators have neither the training nor the experience allowing them to be familiar with the rules and conventions of engineering terminology, let alone the subject matter.
The author of the summary on the survey concludes his remarks by wishing all those concerned "good luck. You'll need it".

In contrast, 100 % of the students in the new four-year degree course for technical translators at Flensburg Polytechnic have to study engineering. Indeed, it is the only specialist subject offered at the moment, so that full weight can be given to it in the curriculum. It is thus not merely a supplementary subject, but forms one of the three pillars on which the course rests. The two other pillars are language proficiency including cultural competence, and language information technology (Fig. 1). These three pillars support the capstone which constitutes the major section of the course: translation.

Before entering into any detail on the engineering component, a brief exposition of these four main components will be given:

- Language proficiency and cultural competence include the teaching of German, English and a supplementary foreign language, and of area studies in preparation for the third year of the course to be spent by all students in an English-speaking country. Students will normally have had eight years of English at school, allowing a level of competence to be reached during the course where texts can be translated in both directions - an essential requirement of translators by German employers. The supplementary language may be studied ab initio, and is at the moment voluntary.

- Language information technology starts with word processing, continues with machine-aided terminology processing and will conclude with machine translation and desk top publishing, all necessary skills for future technical translators.

- Translation is highly integrated with the specialist subject engineering, both in terms of the subject matter and the staff teaching it, as will be explained below. Theoretical and practical aspects of translation are also taught, both in their own right and integrated with language proficiency training.

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- Engineering, in which the majority of the students will have little or no background knowledge, is taught by way of a descriptive and qualitative approach, not by the analytical and quantitative methods commonly employed in an engineering course. A translator needs to understand the process lying behind the description he is translating; he does not have to design or evaluate the process, or indeed to solve engineering problems.

What distinguishes the course in Flensburg most from similar courses elsewhere is the background of the institution and those conceiving the curriculum of the course. Flensburg Polytechnic was until about six years ago an engineering college pure und simple; in contrast, most similar courses in Germany were established in university modern languages departments or in teacher training colleges. Thus it is not surprising that the course at Flensburg was conceived and started by engineers with an interest in languages and translation, which gives it its particular flavour. This is also reflected in the composition of the current full-time teaching staff of six, which comprises one engineer, one physicist, one chemist, one technical translator und two linguists. This designation covers their initial training or earlier professional work; four of the staff members are also qualified as translators and have worked as such. Half of them are native speakers of English, the other half of German; each of them has spend time studying or working abroad, on average close to ten years.

Notably absent are language teachers, theoretical linguists, computer linguists or terminologists; the course is very much application-oriented, as required by the German law on higher education, and little research is done. The full-time staff are supplemented by part-time lecturers mainly in the area of language competence, all of them native speakers; there is currently also a visiting professor of engineering from Ireland at Flensburg.

Engineering being a wide field, what areas should be emphasized? In the survey named above, the respondents were asked about the subject matter of test translations given to them when applying for a job. Not unexpectedly, information technology heads the list of the engineering subjects, followed by automobile technology, aviation and military technology, and nuclear power engineering.

Surprisingly, mechanical engineering is not on the list at all, even though it is the leading export area of German industry, apart from motor vehicles; one explanation might be that no such category was included in the survey, another that employers are looking for translations outside long established areas of work. Be that as it may, engineering as a whole is again the leading specialist subject for translators as perceived by employers.

In response to this demand, technical subjects make up about half the curriculum at Flensburg. Throughout the course, six hours of descriptive engineering are taught per week by the engineers or scientists on the staff. Another four hours of technical translation are taught by the same specialist staff members. In addition, some of the instruction given in language information technology may be seen as related to engineering, even if not all of it is taught by engineers. During the first year of study, the subject areas covered are the fundamentals of engineering and mechanical engineering principles, including automotive and power engineering, all taught in German. This is supplemented by reading parallel literature in English and by translating selected texts in both directions, employing native speakers for the target language. The emphasis is not laid on technical dictionaries at this stage, because it is felt that this would inhibit the student from trying to understand the subject matter, resulting in a tendency to translate words rather than the meaning of the text. Rather, the aim is to develop terminology by studying related texts in the target language and using them as a "word quarry".

To supplement the expertise of staff members, individual lectures are given by specialist colleagues from the engineering departments. This also exposes students to the kind of presentation to be expected from professional engineers. Thus, the areas that may be covered are only limited by the range of engineering subjects taught at Flensburg, which include mechanical engineering, power generation, chemical and process engineering, ships operations (both technical and nautical), biotechnology, electrical engineering, automation and control engineering, information technology and telecommunications. Guest lectures by English-speaking specialists are also given occasionally.

During the second year of study, the emphasis is on engineering physics and electrical engineering, including computer science and telecommunications, now taught in English but parallelled as in the first year by reading literature in German and by translating in both directions.

What teaching materials in engineering are available for the training of technical translators? The standard textbooks for training engineers emphasize quantitative methods of analysis and design; the more equations, graphs and tables they contain, the more they are valued by engineers, but on the whole these are unsuitable for technical translators. There are however textbooks of a more descriptive nature available in Germany, which are used for training apprentices, craftsmen and technicians. Some of these are comparatively comprehensive, covering such subject areas as engineering fundamentals (Fischer 1990) or prime movers and operators (Kittl 1988).

Popular illustrated reference books (Thome 1986) can also be used. Little similar seems to be on the market in English, so matching articles are plucked from reference works such as Encyclopaedia Britannica, the Book of Popular Science and such popular scientific journals as Scientific American. Even books for youngsters such as "How it works" by Ladybird are suitable. These materials in German und English are read in parallel so that the terminology may be extracted in both languages.

In German, short educational video films are also available on many engineering subjects (FWU 1990). Industrial firms are also willing to supply films on their products, and some of these are well suited for teaching purposes (IZE 1989). These films are transcribed and translated by the students; some may be used to extract terminology in "live" sessions, others viewed only better to understand a particular process.

Two-dimensional transparent models of various mechanisms, machines and engines for use on an overhead projector are also available for classroom use. Their tinted parts move and interact with each other. There is also a system of some thirty different three-dimensional gear models on offer in Germany, and additional designs may be made from a set of components.

All the above material is suitable for classroom use. Students are also asked to use the small workshop in the translation department to strip and assemble hub gears of bicycles and engines of mopeds so that they can give oral presentations.

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Written reports are required on individual one- and two-day visits to bicycle and motor car workshops. Group visits take place to the laboratories of the engineering departments of the Polytechnic and to industrial firms in the area, all timed to supplement classroom teaching.

It will no doubt become obvious from this description that such a course can only be run with a small number of students. The nominal annual intake is 15, actual numbers totalled 25, 40 and 50 for the first three years. From this year onward, access will be limited to 20 - 25 students per year to ensure that the concept described above may be implemented and that the students can be placed abroad during their third year. While there is no shortage of potential partner institutions abroad offering subjects such as business studies and economics in conjunction with German, it is difficult to find partners offering a degree in translation who are willing to exchange students. Those institutions in Great Britain traditionally engaged in training translators already have their permanent partner universities on the continent, and programmes of technical translation similar to ours seem to be almost non-existent. Perhaps the survey mentioned at the beginning will give food for thought in this respect.

References

Schmidt 1990
Was übersetzen Übersetzer? - Eine Umfrage
Lebende Sprachen 3/1990

Fischer, M. (ed.) 1988
Fachkunde Metall, Verlag Europa-Lehrmittel, Wuppertal

Kittl, W. et al. 1988
Kraft- und Arbeitsmaschinen, Verlag Europa-Lehrmittel, Wuppertal

Thome, K. (ed.) 1986
Wie funktioniert das? Die Technik im Leben von heute
Meyers Lexikonverlag, Mannheim

FWU 1990
Metalltechnik, Medien des Instituts für Film und Bild in Wissenschaft und Unterricht, Grünwald, Katalog

IZE 1989
Energie, Film- und Videoverzeichnis der Informationszentrale der Elektrizitätswirtschaft, Frankfurt